

## TOE STRETCHER

### FIELD OF INVENTION

The present invention relates to an exercise tool, and more particularly, to an  
5 exercise tool devised as a toe stretcher to align, separate, and stretch toes.

### BACKGROUND OF INVENTION

Exercise tools have long been known in prior art. Sports and yoga enthusiasts  
have devised a myriad of stretching tools. Recently, such stretching tools have been  
10 applied to not only stretch larger muscles, but also toes. Several toe stretchers have been  
invented, where a user places a toe stretcher between the user's toes, effectively  
stretching the toes.

A few advantages of a toe stretcher are that it increases foot strength, increases  
15 toe and ankle flexibility, improves arches, and stretches Achilles' tendons. Although toe  
stretchers devised to date have substantially filled this need, they are difficult to use.  
Existing toe stretchers consist of a frame with five holes for toe insertion. The five holes  
are substantially circular, with each circle being sealed around its perimeter. Because  
each circle is sealed, inserting all five toes has been problematic, making it difficult to put  
20 the toe stretcher on and take it off.

Therefore, it can be appreciated that there exists a continuing need for a new and  
improved toe stretcher that is easier to put on and take off. In this regard, the present  
invention substantially fulfills this need.

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## SUMMARY OF INVENTION

The present invention relates to an exercise tool, and more particularly, to an exercise tool devised as a toe stretcher to align, separate, and stretch toes. The toe stretcher comprises a frame with a separator for separating a plurality of toes, whereby a user may place the toe stretcher on the plurality toes and effectively separate and stretch the toes.

In another aspect, the frame comprises a top portion, a bottom portion, a front portion, and a back portion. In this aspect, the frame further includes a plurality of holes through the frame for insertion of a plurality of toes, wherein each hole in the plurality of holes includes an entrance into the back portion, an exit from the front portion, and surrounding walls connecting the entrance with the exit. Additionally, the surrounding walls in at least one hole in the plurality of holes is continuous and thereby sealed and the surrounding walls in at least one other hole in the plurality of holes is non-continuous and thereby not sealed, serving as an openable toe hole allowing for easy insertion of a toe.

Furthermore, the openable toe hole is sealed through use of an enclosure. The enclosure is selected from a group consisting of Velcro, snaps, an elastic band, hole and pin, and a male/female joint system.

In another aspect, the toe stretcher further comprises a footwear attached with the bottom portion.

In yet another aspect, the frame comprises an elongated top part connected with an elongated bottom part. In this aspect, the frame further includes a plurality of indentations in both the elongated top part and the elongated bottom part for placement of a plurality of toes, whereby upon placing toes upon the indentations on the elongated bottom part, a user may close the frame by closing the elongated top part upon a top side of a corresponding toe or toes.

Furthermore, the elongated top part is connected with the elongated bottom part through a connector. In another aspect, the connector is a hinge. Additionally, an unconnected portion of the elongated top part and an unconnected portion of the elongated bottom part may be connected through use of an enclosure. It is another aspect 5 of the present invention that the enclosure is selected from a group consisting of Velcro, snaps, an elastic band, hole and pin, and a male/female joint system.

In another aspect, the toe stretcher further comprises a footwear attached with the elongated bottom part.

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In another aspect, the frame comprises an elongated top part separated from an elongated bottom part. In this aspect, the frame further includes a plurality of indentations in both the elongated top part and the elongated bottom part for placement of a plurality of toes, whereby upon placing a bottom side of toes upon the indentations on 15 the elongated bottom part, a user may place the elongated top part upon a top side of a corresponding toe or toes and thereby utilize the toe stretcher.

Furthermore, an unconnected portion of the elongated top part and an unconnected portion of the elongated bottom part may be connected through use of an 20 enclosure. The enclosure is selected from a group consisting of Velcro, snaps, an elastic band, hole and pin, and a male/female joint system.

In another aspect, the toe stretcher further comprises a footwear attached with the elongated bottom part.

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In another aspect, the frame comprises an elongated bottom part. In this aspect, the frame further includes a plurality of spacing members in the elongated bottom part, thereby creating a plurality of indentations for placement of a plurality of toes. Additionally, at least one spacing member in the plurality of spacing members includes a 30 vertical hole running from a top side of the at least one spacing member to a bottom side

of the elongated bottom part, whereby a user may utilize the toe stretcher by placing a bottom side of at least one toe upon a corresponding indentation on the elongated bottom part and by placing at least one spacing member between adjacent toes.

5        In another aspect, a filament is placed through the vertical hole. The filament is operative as an attachment, whereby a user may place the attachment over a top side of at least one toe and thereby utilize the toe stretcher.

10      In another aspect, the toe stretcher further comprises footwear attached with the elongated bottom part.

15      It is another aspect of the present invention to claim a method for forming a toe stretcher connected with a footwear. The method comprises an act of connecting a frame with a footwear. In this aspect, the frame has a separator for separating a plurality of toes whereby a user may place the toe stretcher on the plurality toes and effectively separate and stretch the toes.

20      In another aspect, in the act of connecting a frame with a footwear, the frame further includes a top portion, a bottom portion, a front portion, and a back portion, where the bottom portion of the frame is connected with the footwear. In this aspect, the frame further includes a plurality of holes for insertion of a plurality of toes, where each hole has an entrance on the back portion, an exit on the front portion, and surrounding walls connecting the entrance with the exit. Additionally, the surrounding walls in at least one hole in the plurality of holes is continuous and thereby sealed and the surrounding side walls in at least one other hole in the plurality of holes is non-continuous and thereby not sealed, serving as an openable toe hole allowing for easy insertion of a corresponding toe or toes.

In another aspect, in the act connecting a frame with a footwear, the openable toe hole is sealed through use of an enclosure. The enclosure is selected from a group consisting of Velcro, snaps, an elastic band, hole and pin, and a male/female joint system.

5        Additionally, in the act of connecting a frame with a footwear, the bottom portion is integrally molded with the footwear.

In another aspect, in the act of connecting a frame with a footwear, the frame and the footwear are separately formed and the act of connecting is performed by attaching  
10      the frame with the footwear.

In yet another aspect, in the act of connecting a frame with a footwear, the frame further includes an elongated top part connected with an elongated bottom part, where the elongated bottom part of the frame is connected with the footwear. In this aspect, the  
15      frame further includes a plurality of indentations included in both the elongated top part and the elongated bottom part for placement of a plurality of toes, whereby upon placing a bottom side of toes upon the indentations on the elongated bottom part, a user may close the frame by closing the elongated top part upon a top side of a corresponding toe or toes.

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Additionally, in the act of connecting a frame with a footwear, the elongated top part is connected with the elongated bottom part through a connector such as a hinge.

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Furthermore, in the act of connecting a frame with a footwear, an unconnected portion of the elongated top part and an unconnected portion of the elongated bottom part are connected through use of an enclosure.

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In another aspect, in the act of connecting a frame with a footwear, the enclosure is selected from a group consisting of Velcro, snaps, an elastic band, hole and pin, and a male/female joint system.

Additionally, in the act of connecting a frame with a footwear, the elongated bottom part is integrally formed with the footwear.

5 In yet another aspect, in the act of connecting a frame with a footwear, the frame and the footwear are separately formed and the act of connecting is performed by attaching the frame with the footwear.

10 Furthermore, in the act of connecting a frame with a footwear, an unconnected portion of the elongated top part and an unconnected portion of the elongated bottom part are connected through use of an enclosure. The enclosure is selected from a group consisting of Velcro, snaps, an elastic band, hole and pin, and a male/female joint system.

15 In yet another aspect, in the act of connecting a frame with a footwear, the frame further includes an elongated top part separated from an elongated bottom part, where the elongated bottom part is connected with the footwear. The frame further includes a plurality of indentations in both the elongated top part and the elongated bottom part for placement of a plurality of toes, whereby upon placing toes upon the indentations on the elongated bottom part, a user may place the elongated top part upon a top side of a  
20 corresponding toe or toes and thereby complete the frame and utilize the toe stretcher.

25 Additionally, in the act of connecting a frame with a footwear, an unconnected portion of the elongated top part and an unconnected portion of the elongated bottom part may be connected through use of an enclosure. The enclosure is selected from a group consisting of Velcro, snaps, an elastic band, hole and pin, and a male/female joint system.

Furthermore, in the act of connecting a frame with a footwear, the elongated bottom part is integrally molded with the footwear.

In another aspect, in the act of connecting a frame with a footwear, the frame and the footwear are separately formed and the act of connecting is performed by attaching the frame with the footwear.

5        In yet another aspect, in the act of connecting a frame with a footwear, the frame further includes an elongated bottom part with a plurality of spacing members creating a plurality of indentations for placement of a plurality of toes. At least one spacing member in the plurality of spacing members includes a vertical hole running from a top side of the at least one spacing member to a bottom side of the elongated bottom part,  
10      whereby a user may utilize the toe stretcher by placing a bottom side of at least one toe upon a corresponding indentation on the elongated bottom part and by placing at least one spacing member between adjacent toes.

15      Additionally, in the act of connecting a frame with a footwear, a filament is placed through the vertical hole. The filament is operative as an enclosure, whereby a user may place the enclosure over a top side of at least one toe and thereby utilize the toe stretcher.

20      In another aspect, in the act of connecting a frame with a footwear, the frame and the footwear are separately formed and the act of connecting is performed by attaching the frame with the footwear.

In yet another aspect, in the act of connecting a frame with a footwear, the elongated bottom part is integrally molded with the footwear.

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**BRIEF DESCRIPTION OF THE DRAWINGS**

The nature of the toe stretchers described herein will be readily apparent in the following drawings, in which:

- 5 FIG. 1 is a front perspective view of a toe stretcher according to the present invention;
- FIG. 2 is a front perspective view of a toe stretcher according to the present invention, with toes inserted therein;
- 10 FIG. 3 is a front perspective view of the toe stretcher of FIG. 1, with a footwear attached;
- FIG. 4 is a front perspective view illustrating a toe stretcher of the present invention, where an elongated top part is connected with an elongated bottom part;
- 15 FIG. 5 is a front perspective view of the toe stretcher of FIG. 4, with a footwear attached;
- FIG. 6 is a front perspective view illustrating a toe stretcher of the present invention, where an elongated top part is separate and not connected with an elongated bottom part;
- 20 FIG. 7 is a front perspective view of the toe stretcher of FIG. 6, with a footwear attached;
- FIG. 8 is a front perspective view illustrating a toe stretcher of the present invention, where spacing members in an elongated bottom part include a vertical hole running from a top side of at least one spacing member to a bottom side of the elongated bottom part;
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- FIG. 9 is a front perspective view of the toe stretcher of FIG. 8, with a footwear attached.

### DETAILED DESCRIPTION

The present invention relates to an exercise tool, and more particularly, to an exercise tool specifically devised as a toe stretcher to align, separate, and stretch toes.

5       The following description, taken in conjunction with the referenced drawings, is presented to enable one of ordinary skill in the art to make and use the invention.

Various modifications will be readily apparent to those skilled in the art, and the general principles defined herein may be applied to a wide range of aspects. Thus, the present invention is not intended to be limited to the aspects presented, but is to be accorded the widest scope consistent with the principles and novel features disclosed herein.

10     Furthermore it should be noted that unless explicitly stated otherwise, the figures included herein are illustrated diagrammatically and without any specific scale, as they are provided as qualitative illustrations of the concept of the present invention.

15     A toe stretcher **100** according to the present invention is shown in FIG. 1. The toe stretcher **100** comprises a frame **102** with a separator **103** for separating a plurality of toes. The frame **102** may be constructed of any suitable material, non-limiting examples of which include plastic, silicone, and cork. Additionally, the frame **102** may be optionally inflatable or filled with a fluid. When inflatable, the frame **102** may be

20     inflatable to various pressures. Furthermore, the frame **102** may be formed through any suitable means for forming a frame **102**, non-limiting examples of which include injection molding, cast molding, compression molding, and extrusion molding. The frame **102** has a top portion **104**, a bottom portion **106**, a front portion **108**, and a back portion **110**.

25     Included in the frame **102** are a plurality of holes **114**, each configured for insertion of a toe. Each hole has an entrance on the back portion **110**, an exit on the front portion **108**, and surrounding walls **116**. The surrounding walls **116** may be flat, curved or any other suitable shape to accommodate a toe. Additionally, the surrounding walls **116** in at least one hole of the plurality of holes **114** is continuous and thereby sealed,

serving as a sealed toe hole **118**. Additionally, the surrounding walls **116** in at least one other hole in the plurality of holes **114** is non-continuous and thereby not sealed, serving as an openable toe hole **120** allowing for easy insertion of a corresponding toe or toes.

- 5        The openable toe hole **120** may be sealed through use of an enclosure **122**. Furthermore, the enclosure **122** may be any suitable device or mechanism for attaching one medium with another, non-limiting examples of which include Velcro, snaps, an elastic band, hole and pin, and a male/female joint system.
- 10      A toe stretcher **100** with toes **200** inserted therein, is illustrated in FIG. 2. Although at least one hole in the plurality of holes **114** serves as a sealed toe hole **118**, at least one other hole in the plurality of holes **114** is not sealed and serves as an openable toe hole **120**. Because the openable toe hole **120** is not sealed, the toe stretcher **100** may be easily distorted and manipulated to allow easy insertion of toes **200** therein. The significance of the openable toe hole **120** is that without the openable toe hole **120**, the toe stretcher is not easily manipulated, thereby making it difficult to utilize existing toe stretchers.

- The toe stretcher **100** of FIG. 1 is shown in FIG. 3 attached with a footwear **300**.
- 20      As illustrated, the bottom portion **106** is attached with the footwear **300**. The bottom portion **106** may be integrally molded with the footwear **300** or separately formed and thereafter attached with the footwear **300**. When separately formed and attached, the bottom portion **106** may be attached with the footwear **300** through any suitable device or mechanism for attaching one medium with another, non-limiting examples of which include Velcro, an adhesive, snaps, an elastic band, hole and pin, and a male/female joint system. Furthermore, the footwear **300** may be any suitable footwear, a non-limiting example of which includes a sandal.

- FIG. 4 illustrates another aspect of the toe stretcher **400** of the present invention.
- 30      In this aspect, the toe stretcher **400** comprises a frame **402** with a separator **403** for

separating a plurality of toes. The frame **402** may be constructed of any suitable material, non-limiting examples of which include plastic, silicone, and cork. Additionally, the frame **402** may be optionally inflatable or filled with a fluid. When inflatable, the frame **402** may be inflatable to various pressures. Furthermore, the frame **402** may be formed through any suitable means for forming a frame **402**, non-limiting examples of which include injection molding, cast molding, compression molding, and extrusion molding.

The frame **402** has an elongated top part **404** and an elongated bottom part **406**. The elongated top part **404** and the elongated bottom part **406** each have a plurality of indentations **408** for placement of a plurality of toes. The plurality of indentations **408** may be flat, curved or any other suitable shape to accommodate a toe.

The elongated top part **404** is connected with the elongated bottom part **406** through a connector **410**. The connector **410** may be located at any suitable location for connecting the elongated top part **404** with the elongated bottom part **406**, non-limiting examples of which include being connected on a big-toe indentation side, on a little-toe indentation side, and between two toe indentations. For example, FIGS. 4 and 5 illustrate the connector **410** located on little-toe indentation side **411**. Additionally, the connector **410** may be any suitable device or mechanism for connecting two mediums together, a non-limiting example of which includes a hinge. Through use of the connector **410**, a user may place a bottom side of the toes upon the plurality of indentations **408** and close the frame **402** by closing the elongated top part **404** upon a top side of a corresponding toe or toes.

Additionally, an unconnected portion of the elongated top part **412** and an unconnected portion of the elongated bottom part **414** may be connected through use of an enclosure **122**. The enclosure **122** may be located at any unconnected portion of the elongated top part **412** and respective unconnected portion of the elongated bottom part **414**. For example and as shown in FIG. 4, the enclosure **122** may be located at unconnected end portions of the elongated bottom top part **412** and elongated bottom part

414. As an alternative example, the enclosure **122** may be located at unconnected tip portions **416** of corresponding separators **403**. The enclosure **122** may be any suitable device or mechanism for attaching one medium with another, non-limiting examples of which include Velcro, snaps, an elastic band, hole and pin, and a male/female joint system.

5        The toe stretcher **400** of FIG. 4 is shown in FIG. 5 attached with a footwear **300**. As illustrated, the elongated bottom part **406** is attached with the footwear **300**. The elongated bottom part **406** may be integrally molded with the footwear **300** or separately formed and thereafter attached with the footwear **300**. When separately formed and attached, the elongated bottom part **406** may be attached with the footwear **300** through any suitable mechanism or device for attaching one medium with another, non-limiting examples of which include Velcro, an adhesive, snaps, an elastic band, hole and pin, and a male/female joint system. Furthermore, the footwear **300** may be any suitable 10      footwear, a non-limiting example of which includes a sandal.

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FIG. 6 illustrates another aspect of the toe stretcher **600** of the present invention. In this aspect, the toe stretcher comprises a frame **602** with a separator **603** for separating a plurality of toes. The frame **602** may be constructed of any suitable material, non- 20      limiting examples of which include plastic, silicone, and cork. Additionally, the frame **602** may be optionally inflatable or filled with a fluid. When inflatable, the frame **602** may be inflatable to various pressures. Furthermore, the frame **602** may be formed through any suitable means for forming a frame **602**, non-limiting examples of which include injection molding, cast molding, compression molding, and extrusion molding.

25      Additionally, the frame **602** has an elongated top part **604** and an elongated bottom part **606**. The elongated top part **604** and the elongated bottom part **606** each have a plurality of indentations **608** for placement of a plurality of toes. A key difference between the frame **602** in this aspect and that as illustrated in FIG. 4, is that in 30      this aspect, the elongated top part **604** is not connected with the elongated bottom part

606. An unconnected portion of the elongated top part **610** and an unconnected portion of the elongated bottom part **612** may be connected through use of an enclosure **122**. The enclosure **122** may be located at any unconnected portion of the elongated top part **610** and corresponding unconnected portion of the elongated bottom part **612**. For example  
5 and as shown in FIG. 6, the enclosure **122** may be located at unconnected end portions of the elongated bottom top part **610** and elongated bottom part **612**. As an alternative example, the enclosure **122** may be located at unconnected tip portions **614** of corresponding separators **603**. The enclosure **122** may be any suitable mechanism or device for attaching one medium with another, non-limiting examples of which include  
10 Velcro, snaps, an elastic band, hole and pin, and a male/female joint system.

The toe stretcher **600** of FIG. 6 is shown in FIG. 7 attached with a footwear **300**. As illustrated, the elongated bottom part **606** is attached with the footwear **300**. The elongated bottom part **606** may be integrally molded with the footwear **300** or separately formed and thereafter attached with the footwear **300**. When separately formed and attached, the elongated bottom part **606** may be attached with the footwear **300** through any suitable mechanism or device for attaching one medium with another, non-limiting examples of which include Velcro, an adhesive, snaps, an elastic band, hole and pin, and a male/female joint system. Furthermore, the footwear **300** may be any suitable  
15 footwear, a non-limiting example of which includes a sandal.  
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As illustrated, the elongated top part **604** may be held together with the elongated bottom part **606** through use of an enclosure **122**. In this particular illustration, the enclosure **122** is an elastic band pulling the elongated top part **604** towards the elongated bottom part **606**. When the enclosure **122** is an elastic band, the band may be attached with the toe stretcher through any suitable mechanism or device. For example, the band may integrally attached, or alternatively, held in a groove like an o-ring.  
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FIG. 8 illustrates yet another aspect of the toe stretcher **800**. In this aspect, the toe  
30 stretcher **800** comprises a frame **802** with a separator **803** for separating a plurality of

toes. The frame **802** may be constructed of any suitable material, non-limiting examples of which include plastic, silicone, and cork. Additionally, the frame **802** may be optionally inflatable or filled with a fluid. When inflatable, the frame **802** may be inflatable to various pressures. Furthermore, the frame **802** may be formed through any 5 suitable means for forming a frame **802**, non-limiting examples of which include injection molding, cast molding, compression molding, and extrusion molding.

The frame **802** comprises an elongated bottom part **804** that includes a plurality of spacing members **806**. The plurality of spacing members **806** create a plurality of indentations **808** for placement of a plurality of toes. At least one spacing member in the 10 plurality of spacing members **806** includes a vertical hole **810** running from a top side **812** of the at least one spacing member to a bottom side **814** of the elongated bottom part **804**. A user may utilize the toe stretcher **800** by placing a bottom side of at least one toe upon a corresponding indentation on the elongated bottom part **804** and by placing at 15 least one spacing member **806** between adjacent toes.

Additionally, a filament **816** may be placed through the vertical hole **810**. The filament may be any suitably elongated material, non-limiting examples of which include an elastic band, string, and ribbon. The filament **816** is operative as an attachment, 20 attaching the elongated bottom part **804** with a bottom side of at least one toe, or when flipped over, with a top side of at least one toe. Accordingly, a user may place the filament **816** over at least one toe and thereby utilize the toe stretcher.

The toe stretcher **800** of FIG. 8 is shown in FIG. 9 attached with a footwear **300**.  
25 As illustrated, the elongated bottom part **804** is attached with the footwear **300**. The elongated bottom part **804** may be integrally molded with the footwear **300** or separately formed and thereafter attached with the footwear **300**. When separately formed and attached, the elongated bottom part **804** may be attached with the footwear **300** through any suitable mechanism or device for attaching one medium with another, non-limiting 30 examples of which include Velcro, an adhesive, snaps, an elastic band, hole and pin, and

a male/female joint system. Furthermore, the footwear **300** may be any suitable footwear, a non-limiting example of which includes a sandal.

- In this particular illustration, the filament **816** is positioned such that it may be  
5 placed over at least one toe in order to keep the footwear **300** attached with a foot. In an alternative position, the filament **816** may be wrapped around a user's ankle.